

CLAIMS

What is claimed is:

1. A system, comprising:
a transmitter to send data frames over a multilink data connection;
a receiver to receive data frames over the multilink data connection; and
the multilink data connection, containing a set of individual links given a credit value based on speed of data transmission and current level of data traffic for each link.
2. The system of claim 1, wherein an initial credit value is equal to data capable of being sent over the link in the set period of time.
3. The system of claim 2, wherein a current credit value is equal to the initial credit value minus data currently being transmitted.
4. The system of claim 3, wherein the current credit value is reset to the initial credit value originally given.
5. The system of claim 4, wherein reset occurs when all the links have a current credit value of zero.

6. The system of claim 4, wherein reset occurs when a link has a negative current credit value.
7. The system of claim 4, wherein reset occurs when a preset time period has passed.
8. The system of claim 3, wherein, if two links have the same current credit value, a data frame is sent over the link that has a slower speed of data transmission.
9. The system of claim 1, wherein a data frame is sent over the link with the credit value that is largest.
10. A method, comprising:
 - determining a rating of a link in a multilink data connection based on an amount of data that can be transmitted across the link in a set period of time;
 - assigning an initial credit value to the link based on the rating;
 - producing a current credit value by reducing the initial credit value proportionate to an amount of data currently being transmitted on the link;
 - assigning a data frame to be transmitted across the link based on the current credit value; and
 - transmitting the data frame across the link.

11. The method of claim 10, wherein the initial value equals the number of bytes of data.
12. The method of claim 10, wherein the data frame is sent over the link that has a credit value greater than the credit value of other links in the multilink data connection.
13. The method of claim 10, further including reducing the current credit value after a data frame fragment is sent across the link.
14. The method of claim 13, wherein the current credit value is reduced based on the size of the frame sent.
15. The method of claim 10, further including resetting the current credit value to the initial credit value.
16. The method of claim 15, wherein reset occurs when all the links have a current credit value of zero.
17. The method of claim 15, wherein reset occurs when a link has a negative current credit value.

18. The method of claim 15, wherein reset occurs when a preset time period has passed.
19. The method of claim 10, wherein, if no single link has a current credit value greater than any other link, the data frame is assigned to the link with a slower speed of data transmission than other links with an equal credit value.
20. A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method comprising:
 - determining a rating of a link in a multilink data connection based on an amount of data that can be transmitted across the link in a set period of time;
 - assigning an initial credit value to the link based on the rating;
 - producing a current credit value by reducing the initial credit value proportionate to an amount of data currently being transmitted on the link;
 - assigning a data frame to be transmitted across the link based on the current credit value; and
 - transmitting the data frame across the link.
21. The machine-readable storage medium of claim 20, wherein the initial value equals the number of bytes of data.

22. The machine-readable storage medium of claim 20, wherein the data frame is sent over the link that has a credit value greater than the credit value of other links in the multilink data connection.
23. The machine-readable storage medium of claim 20, further including reducing the current credit value after a data frame fragment is sent across the link.
24. The machine-readable storage medium of claim 23, wherein the current credit value is reduced based on the size of the frame sent.
25. The machine-readable storage medium of claim 20, further including resetting the current credit value to the initial credit value.
26. The machine-readable storage medium of claim 25, wherein reset occurs when all the links have a current credit value of zero.
27. The machine-readable storage medium of claim 25, wherein reset occurs when a link has a negative current credit value.
28. The machine-readable storage medium of claim 25, wherein reset occurs when a preset time period has passed.

29. The machine-readable storage medium of claim 20, wherein, if no single link has a current credit value greater than any other link, the data frame is assigned to the link with a slower speed of data transmission than other links with an equal credit value.
30. An apparatus, comprising:
- a means for determining a rating of a link in a multilink data connection based on an amount of data that can be transmitted across the link in a set period of time;
 - a means for assigning an initial credit value to the link based on the rating;
 - a means for producing a current credit value by reducing the initial credit value proportionate to an amount of data currently being transmitted on the link;
 - a means for assigning a data frame to be transmitted across the link based on the current credit value; and
 - a means for transmitting the data frame across the link.
31. The apparatus of claim 30, wherein the initial value equals the number of bytes of data.
32. The apparatus of claim 30, wherein the data frame is sent over the link that has a credit value greater than the credit value of other links in the multilink data connection.

33. The apparatus of claim 30, further including a means for reducing the current credit value after a data frame fragment is sent across the link.
34. The apparatus of claim 33, wherein the current credit value is reduced based on the size of the frame sent.
35. The apparatus of claim 30, further including a means for resetting the current credit value to the initial credit value.
36. The apparatus of claim 35, wherein reset occurs when all the links have a current credit value of zero.
37. The apparatus of claim 35, wherein reset occurs when a link has a negative current credit value.
38. The apparatus of claim 35, wherein reset occurs when a preset time period has passed.
39. The apparatus of claim 30, wherein, if no single link has a current credit value greater than any other link, the data frame is assigned to the link with a slower speed of data transmission than other links with an equal credit value.
40. An apparatus, comprising:

a transceiver to send and receive data frames over a multilink data connection,
the multilink data connection containing a set of individual links given a set
of credit values based on speed of data transmission and current level of
data traffic for each link.

41. The apparatus of claim 40, wherein the set of credit values includes an initial credit value is equal to data capable of being sent over the link in the set period of time.
42. The apparatus of claim 41, wherein the set of credit values includes a current credit value is equal to the initial credit value minus data currently being transmitted.
43. The apparatus of claim 42, wherein the current credit value is reset to the initial credit value originally given.
44. The apparatus of claim 43, wherein reset occurs when all the links have a current credit value of zero.
45. The apparatus of claim 43, wherein reset occurs when a link has a negative current credit value.

46. The apparatus of claim 43, wherein reset occurs when a preset time period has passed.
47. The apparatus of claim 42, wherein, if two links have the same current credit value, a data frame is sent over the link that has a slower speed of data transmission.
48. The apparatus of claim 40, wherein a data frame is sent over the link with the current credit value that is largest.
49. A method, comprising:
determining a rating of a link in a multilink data connection based on an amount of data that can be transmitted across the link in a set period of time;
assigning an initial credit value to the link based on the rating;
producing a current credit value by reducing the initial credit value proportionate to an amount of data currently being transmitted on the link;
assigning a data frame to be transmitted across the link based on the current credit value;
transmitting the data frame across the link;
reducing the current credit value after a data frame fragment is sent across the link; and
resetting the current credit value to the initial credit value.